Reviews of Infectious Diseases

An Official Publication of the Infectious Diseases Society of America

Edward H. Kass, *Editor*
Neil R. Blacklow, *Associate Editor*
John R. David, *Associate Editor*
Sherwood L. Gorbach, *Associate Editor*
Alice S. Huang, *Associate Editor*
Dennis L. Kasper, *Associate Editor*
Jerome O. Klein, *Associate Editor*

Joan B. Daniels, *Assistant Editor*
Nancy Kurz Voynow, *Managing Editor*
Julie McCoy, *Manuscript Editor*
Jaylyn Olivo, *Manuscript Editor*
Ronald L. Rouse, *Manuscript Editor*
Sarah Stephens, *Staff Assistant*

EDITORIAL BOARD

Robert Austrian, Philadelphia, Pa.
Michael M. Frank, Bethesda, Md.
Lawrence R. Freedman, Los Angeles, Calif.
D. Carleton Gajdusek, Bethesda, Md.
King K. Holmes, Seattle, Wash.
Harold J. Jennings, Ottawa, Canada
Richard T. Johnson, Baltimore, Md.
Samuel L. Katz, Durham, N.C.
Thomas C. Merigan, Jr., Stanford, Calif.
Kenneth S. Warren, New York, N.Y.
Frank E. Young, Silver Spring, Md.

INTERNATIONAL BOARD OF DIRECTORS

Jacques F. Acar, Paris, France
Ralph van Furth, Leiden, The Netherlands
Lars O. Kallings, Stockholm, Sweden
Jean Klastersky, Brussels, Belgium
P. Helena Mäkelä, Helsinki, Finland
Francis O'Grady, Nottingham, England
Theodore G. Sacks, Jerusalem, Israel
Hung Tao, Beijing, China
David A. J. Tyrrell, Salisbury, England
Yuichi Yamamura, Osaka, Japan

Volume 11

January–December 1989

All rights reserved
THE UNIVERSITY OF CHICAGO PRESS, CHICAGO
THE UNIVERSITY OF CHICAGO PRESS LTD., LONDON S.W. 1

© 1989 BY THE UNIVERSITY OF CHICAGO
PUBLISHED BIMONTHLY JANUARY–DECEMBER

PRINTED IN USA

Reviews of Infectious Diseases

Volume 11 • Number 1 • January–February 1989

REVIEW ARTICLES

Caroline A. Ryan, Nancy T. Hargrett-Bean, and Paul A. Blake	*Salmonella typhi* Infections in the United States, 1975–1984: Increasing Role of Foreign Travel	1
Victor Israele and Jane D. Siegel	Infectious Complications of Craniofacial Surgery in Children	9
Robert Bjerknes, Carl-Fredrik Bassø, Haakon Sjursen, Ole Didrik Laerum, and Claus Ola Solberg	Flow Cytometry for the Study of Phagocyte Functions	16
Moshe Arditi, Stanford T. Shulman, A. Todd Davis, and Ram Yogev	Group C β-Hemolytic Streptococcal Infections in Children: Nine Pediatric Cases and Review	34
Andrew H. Kaplan, David J. Weber, Eugene Z. Oddone, and John R. Perfect	Infection Due to *Actinobacillus actinomycetemcomitans*: 15 Cases and Review	46
Kenneth E. Schmader, Charles M. van der Horst, and Mary E. Klotman	Epstein-Barr Virus and the Elderly Host	64
Robert M. Gullberg, Scott R. Homann, and John P. Phair	Enterococcal Bacteremia: Analysis of 75 Episodes	74

CLINICAL NOTES

Giuseppe E. Bignardi and David Isaacs	Neonatal Meningitis Due to *Streptococcus mitis*	86
Rabin O. Darouiche, Richard J. Hamill, Daniel M. Musher, Edward J. Young, and Richard L. Harris	Periprosthetic Candidal Infections Following Arthroplasty	89
Jerome H. Kim, Randolph A. Cooper, Karen E. Welty-Wolf, Lizzie J. Harrell, Peter Zwadyk, and Mary E. Klotman	*Pseudomonas putrefaciens* Bacteremia	97
Lawrence Dall, Lana Long, and James Stanford	Poncet's Disease: Tuberculous Rheumatism	105
Ho-Wen Hsu and Robert W. Finberg	Infectious Disease Rounds: Infections Associated with Animal Exposure in Two Infants	108

INTERNATIONAL NOTES

N. E. Gomwalk and A. A. Ahmad	Prevalence of Rubella Antibodies on the African Continent	116

EDITORIALS

Howard L. Quentzel, Robert B. Nadelman, Jeffrey Ng, and Gary P. Wormser	SI Units and the Clinical Practice of Infectious Diseases: Application to the Usage of Antimicrobial Agents	122
John A. Washington II	Comment on SI Units	127

HISTORICAL ARTICLES

STEPHEN R. ELL — Three Days in October of 1630: Detailed Examination of Mortality During an Early Modern Plague Epidemic in Venice — 128

BORIS VELOMIROVIC — Comment on "Three Days in October of 1630" — 140

GUSTAVE J. DAMMIN — Erythema Migrans: A Chronicle — 142

CORRESPONDENCE

ANNE G. MATLOW AND ANITA R. RACHLIS — Opportunistic Infections in "Normal Hosts" — 152

D. HUMINER AND S. D. PITLIK — Reply — 153

NOTICES — 154

REVIEWERS FOR VOLUME 10 — 155

STATEMENT OF EDITORIAL POLICY — 158

INSTRUCTIONS TO AUTHORS — 159

Volume 11 • Supplement 1 • January–February 1989

INTERNATIONAL SYMPOSIUM ON TOXIC SHOCK SYNDROME

Participants — viii

CLINICAL AND EPIDEMIOLOGIC ASPECTS

P. JOAN CHESNEY — Clinical Aspects and Spectrum of Illness of TSS: Overview — S1

JAY A. JACOBSON, EVELYN KASWORM, AND JUDY A. DALY — Risk of Developing TSS Associated with TSST-1 Following Nongenital Staphylococcal Infection — S8

CLAIRE V. BROOME — Epidemiology of TSS in the United States: Overview — S14

DIANA B. PETITTI AND ARTHUR L. REINGOLD — Update Through 1985 on the Incidence of TSS Among Members of a Prepaid Health Plan — S22

SUZANNE GAVENTA, ARTHUR L. REINGOLD, ALLEN W. HIGHTOWER, CLAIRE V. BROOME, BENJAMIN SCHWARTZ, CAROLYN HOPPE, JAN HARWELL, LEWIS K. LEFKOWITZ, SUE MAKINTUBEE, DAVID R. CUNDIFF, SANDRA SITZE, AND THE TSS STUDY GROUP — Active Surveillance for TSS in the United States, 1986 — S28

ARTHUR L. REINGOLD, CLAIRE V. BROOME SUZANNE GAVENTA, ALLEN W. HIGHTOWER, AND THE TSS STUDY GROUP — Risk Factors for Menstrual TSS: Results of a Multistate Case-Control Study — S35

BENJAMIN SCHWARTZ, SUZANNE GAVENTA, CLAIRE V. BROOME, ARTHUR L. REINGOLD, ALLEN W. HIGHTOWER, JEFFREY A. PERLMAN, PAMELA H. WOLF, AND THE TSS STUDY GROUP — Nonmenstrual TSS Associated with Barrier Contraceptives: Report of a Case-Control Study — S43

Jeffrey P. Davis, James V. Vergeront, Lori E. Amsterdam, Julie Hayward, and Susan J. Stolz-LaVerriere	Long-Term Effects of TSS in Women: Sequelae, Subsequent Pregnancy, Menstrual History, and Long-Term Trends in Catamenial Product Use [abstract]	S50
	General Discussion	S52
	MICROBIOLOGY AND GENETICS	
Raymond H. See and Anthony W. Chow	Microbiology of TSS: Overview	S55
A. B. Onderdonk, M. L. Delaney, G. R. Zamarchi, M. L. Hirsch, A. Munoz, and E. H. Kass	Normal Vaginal Microflora During Use of Various Forms of Catamenial Protection	S61
Anthony W. Chow and Karen H. Bartlett	Sequential Assessment of Vaginal Microflora in Healthy Women Randomly Assigned to Tampon or Napkin Use	S68
Gregory A. Bohach, Barry N. Kreiswirth, Richard P. Novick, and Patrick M. Schlievert	Analysis of TSS Isolates Producing Staphylococcal Enterotoxins B and C1 with Use of Southern Hybridization and Immunologic Assays	S75
Barry N. Kreiswirth, Steven J. Projan, Patrick M. Schlievert, and Richard P. Novick	TSST-1 is Encoded by a Variable Genetic Element	S83
Peter F. Bonventre, Lana Weckbach, Guenter Harth, and Constantine Haidaris	Distribution and Expression of TSST-1 Gene Among *Staphylococcus aureus* Isolates of TSS and Non-TSS Origin	S90
	General Discussion	S96
B. N. Kreiswirth	Genetics and Expression of TSST-1: Overview	S97
May C. Chu, Marian E. Melish, and John F. James	Growth of TSST-1-Producing, Tryptophan-Requiring Strains of *Staphylococcus aureus* Associated with the Presence of *Escherichia coli*	S101
	General Discussion	S104
	TSST-1: STRUCTURE, FUNCTION, PURIFICATION, AND DETECTION	
Patrick M. Schlievert	Role of TSST-1 in TSS: Overview	S107
Patricia M. Rosten, Karen H. Bartlett, and Anthony W. Chow	Purification and Purity Assessment of TSST-1	S110
David W. Lawellin, Amalia Franco-Buff, and James K. Todd	Alteration of Proteins Reacting with Antibody to TSST-1 by Endogenous Proteases of *Staphylococcus aureus*	S117
Nighat P. Kokan-Moore and Merlin S. Bergdoll	Determination of Biologically Active Region in TSST-1	S125
W. W. Hall, S. Blander, R. Kakani, V. A. Fischetti, and J. B. Zabriskie	Identification of a New Toxin in a Strain of *Staphylococcus aureus* Isolated from a Patient with Nonmenstrual TSS	S130
Chitra Edwin	Structure-Function Analysis of TSST-1 [extended abstract]	S137
	General Discussion	S140
	TSST-1: REGULATION AND CONTROL	
Merlin S. Bergdoll	Regulation and Control of TSST-1: Overview	S142
Michael W. Reeves	Effect of Trace Metals on the Synthesis of TSST-1	S145

D. Taylor and K. T. Holland	Production of TSST-1 by *Staphylococcus aureus* Under Aerobic and Anaerobic Conditions and the Effect of Magnesium Ion Limitation	S151
John F. James, M. C. Chu, L. Lee, S. A. Peck, C. McKissick, H. Sullivan, K. Frogner, and M. Melish	Effect of Magnesium on in Vitro Production of TSST-1	S157
Edward H. Kass	Magnesium and the Pathogenesis of TSS	S167
V. A. Fischetti, F. Chapman, R. Kakani, J. James, E. Grun, and J. B. Zabriskie	Role of Air in Growth and Production of TSST-1 by *Staphylococcus aureus* in Experimental Cotton and Rayon Tampons	S176
Philip M. Tierno, Jr., and Bruce A. Hanna	Ecology of TSS: Amplification of TSST-1 by Materials of Medical Interest	S182
Jerry J. Kirkland, Cynthia A. Ryan, Karen A. Kohrman, and Pamela J. Danneman	Growth of *Staphylococcus aureus* and Synthesis of TSST-1 in Different in Vitro Systems	S188
Ruth N. Robbins, Brenda J. Kelly, Gene L. Hehl, and Merlin S. Bergdoll	Effect of Tampon Wraps on Production of TSST-1	S197
	General Discussion	S203
	ANIMAL MODELS	
Joyce C. S. de Azavedo	Animal Models for TSS: Overview	S205
Hideo Igarashi, Hiroshi Fujikawa, and Hiroyuki Usami	Effects of Drugs on the Pyrogenicity of TSST-1 and Its Capacity to Enhance Susceptibility to the Lethal Effects of Endotoxic Shock in Rabbits	S210
David F. Scott, Gary K. Best, J. Malcolm Kling, Michael R. Thompson, Luigi E. Adinolfi, and Peter F. Bonventre	Passive Protection of Rabbits Infected with TSS-Associated Strains of *Staphylococcus aureus* by Monoclonal Antibody to TSST-1	S214
Marian E. Melish, Susanna Murata, Cynthia Fukunaga, Kanitha Frogner, Shirley Hirata, and Cecily Wong	Endotoxin is Not an Essential Mediator in TSS	S219
K. A. Kohrman, J. J. Kirkland, and P. J. Danneman	Response of Various Animal Species to Experimental Infection with Different Strains of *Staphylococcus aureus*	S231
Marian E. Melish, Susanna Murata, Cynthia Fukunaga, Kanitha Frogner, and Carol McKissick	Vaginal Tampon Model for TSS	S238
Malgorzata Bulanda, Malgorzata Zaleska, Leos Mandel, Marie Talafantova, Jiri Travnicek, Gert Kunstmann, Gottfried Mauff, Gerhard Pulverer, and Piotr B. Heczko	Toxicity of Staphylococcal TSST-1 for Germ-Free and Conventional Piglets	S248
Jean C. Lee, Norma E. Perez, and Cheryl A. Hopkins	Production of TSST-1 in a Mouse Model of *Staphylococcus aureus* Abscess Formation	S254
	General Discussion	S260
	MEDIATORS/PATHOGENESIS	
Jeffrey Parsonnet	Mediators in the Pathogenesis of TSS: Overview	S263

Anthony W. Chow and Justina Wong	Cervicovaginal Opsonic Activity, Immunoglobulins, Complement, and Soluble Fibronectin in Healthy Women Randomly Assigned to Tampon or Napkin Use	S270
Annamarie Drumm, Joyce C. S. de Azavedo, and John P. Arbuthnott	Damaging Effect of TSST-1 on Chick Embryo Cells in Vitro	S275
Vladimir M. Kushnaryov, Hector S. MacDonald, Raoul F. Reiser, and Merlin S. Bergdoll	Reaction of TSST-1 with Endothelium of Human Umbilical Cord Vein	S282
Donald H. Beezhold, Gary K. Best, Peter F. Bonventre, and Michael Thompson	Endotoxin Enhancement of TSST-1-Induced Secretion of Interleukin 1 by Murine Macrophages	S289
R. J. Arko, W. O. Schalla, D. D. Cruce, Francis W. Chandler, George M. Carlone, Michael W. Reeves, and S. A. Morse	Characteristics of TSST-1-Induced Lectin-Like Activity and Inhibitor(s) in Rabbit Serum	S294
V. V. Micusan, M. Desrosiers, J. Gosselin, G. Mercier, D. Oth, A. R. Bhatti, H. Heremans, and A. Billiau	Stimulation of T Cells and Induction of Interferon by TSST-1	S305
Richard D. Olson, Dennis L. Stevens, and Marian E. Melish	Direct Effects of Purified Staphylococcal TSST-1 on Myocardial Function of Isolated Rabbit Atria	S313
T. Ikejima, S. Okusawa, J. W. M. Van Der Meer, and C. A. Dinarello	TSS is Mediated by Interleukin 1 and Tumor Necrosis Factor [abstract]	S316
Jeffrey Parsonnet, Zoe A. Gillis, Michael R. Thompson, Luigi Adinolfi, and Peter F. Bonventre	Effects of Monoclonal Antibody on Biologic Function of TSST-1 in Vitro and in Vivo [abstract]	S318
	General Discussion	S320
	POSTER SESSION	
C. M. Helms and L. A. Wintermeyer	TSS in Iowa: Comparison of Definite, Probable, and Uncertain Cases [abstract]	S324
Jay A. Jacobson, Evelyn M. Kasworm, Robert G. Bolte, and Howard M. Corneli	Prevalence of Nasal Carriage of Toxigenic *Staphylococcus aureus* and Antibody to TSST-1 in Utah Children [abstract]	S324
R. R. Marples	TSS and Related Conditions in Great Britain [abstract]	S326
H. Igarashi, H. Fujikawa, and H. Ushioda	Studies on *Staphylococcus aureus* Isolated from Patients with Suspected or Confirmed TSS in Japan [abstract]	S326
P. Ewan, S. Tessier, and E. Ofori	Toxin Testing and Phage Typing of *Staphylococcus aureus* Strains Isolated from Suspected Cases of TSS in Canada [abstract]	S327
James Adekeye, Ørjan Olsvik, and and Kare Fossum	Production of TSST-1 in *Staphylococcus aureus* Strains from Various Sources in Nigeria, Norway, and Denmark [abstract]	S327
May C. Chu and John F. James	Menstruation-Related Symptoms Associated with a Vaginal "Bloom" of *Staphylococcus aureus* Positive for TSST-1 [abstract]	S328
R. Chapman-Winokur, L. Ospina, and C. Lauter	Hypocalcemia of TSS [abstract]	S329

Peggy S. Hayes, Lewis M. Graves, B. Swaminathan, Gloria W. Ajello, and Roger M. McKinney	Detection of TSST-1 in Spent Culture Medium by Reversed Passive Latex Agglutination and Enzyme Immunoassays [abstract]	S329
T. Ikejima, S. F. Orencole, S. J. C. Warner, and C. A. Dinarello	TSST-1 Resistance in Mice is Related to Interleukin 1 Production by TSST-1 [abstract]	S330
T. Chatila, N. Wood, J. Parsonnet, F. Rosen, and R. S. Geha	TSST-1 Induces Inositol Phospholipid Turnover, Protein Kinase C Translocation, and Calcium Mobilization in Human T Cells [abstract]	S330
S. Anderson, C. Jupin, J. de Azavedo, C. Damais, M. Parant, and J. E. Alouf	TSST-1 Induces Production of Tumor Necrosis Factor by Human Monocytes and of Interferon-γ, Interleukin 2, and Lymphotoxin by Lymphocytes [abstract]	S331
K. Bykowska, S. Lopaciuk, G. Kunstmann, G. Mauff, M. Bulanda, and P. B. Heczko	Effect of TSST-1 on Human Platelets [abstract]	S331
E. M. Berger, S. N. Brown, and J. E. Repine	Exposure of Serum to Tampon Fibers or Surgical Gauze Decreases Serum-Dependent Neutrophil Bactericidal Activity Against *Staphylococcus aureus* in Vitro [abstract]	S331
F. Quimby and R. Reiser	Preliminary Observations on the Ability of Tampons to Support the Growth of *Staphylococcus aureus* and TSST-1 Secretion During Menstruation in Baboons [abstract]	S332
M. E. Melish, S. Murata, C. Fukunaga, K. Frogner, and C. McKissick	Corticosteroid and Immunoglobulin Therapy in TSS [abstract]	S332
G. Kunstmann, G. Peters, H. Hasbach, and G. Pulverer	Staphylococcal Exoprotein Different from TSST-1 Enhances Endotoxin Susceptibility in Rabbits [abstract]	S333
E. Carlson and D. Gregg	Hematologic Response to TSST-1 in Four Strains of Mice [abstract]	S333

Volume 11 • Number 2 • March–April 1989

REVIEW ARTICLES

Allen G. Reuben, Daniel M. Musher, Richard J. Hamill, and Ingrid Broucke	Polymicrobial Bacteremia: Clinical and Microbiologic Patterns	161
Peter J. Ruane, Michael M. Nakata, John F. Reinhart, and W. Lance George	Spriochete-Like Organisms in the Human Gastrointestinal Tract	184
David Chua, Harald H. Reinhart, and Jack D. Sobel	Liver Abscess Caused by *Streptococcus milleri*	197
John A. Shadduck	Human Microsporidiosis and AIDS	203
Luis Guerra-Romero, Amalio Telenti, Rodney L. Thompson, and Glenn D. Roberts	Polymicrobial Fungemia: Microbiology, Clinical Features, and Significance	208
P. J. van den Broek	Antimicrobial Drugs, Microorganisms, and Phagocytes	213
Jordan B. Glaser, Margaret R. Hammerschlag, and William M. McCormack	Epidemiology of Sexually Transmitted Diseases in Rape Victims	246

Mark G. Thomas	Epidemiology of Pertussis	255
Gail L. Woods, R. Patrick Wood, and Byers W. Shaw, Jr.	Aspergillus Endocarditis in Patients Without Prior Cardiovascular Surgery: Report of a Case in a Liver Transplant Recipient and Review	263
Mark A. Beilke	Vascular Endothelium in Immunology and Infectious Disease	273
Patti J. Miller, Barry M. Farr, and Jack M. Gwaltney, Jr.	Economic Benefits of an Effective Infection Control Program: Case Study and Proposal	284
Edward H. Kaplan	Needles That Kill: Modeling Human Immunodeficiency Virus Transmission via Shared Drug Injection Equipment in Shooting Galleries	289
N. Le Saux and A. R. Ronald	Role of Ceftriaxone in Sexually Transmitted Diseases	299
J. Bisbe, J. M. Miro, J. M. Torres, X. Latorre, C. Alia, M. Amaral, D. Estivill, J. Maliolas, A. Trilla, and E. Soriano	Diagnostic Value of Serum Antibody and Antigen Detection in Heroin Addicts with Systemic Candidiasis	310
	CLINICAL NOTES	
José M. Mostaza, Francisco J. Barbado, J. Fernandez-Martin, J. Peña-Yañez, and Juan J. Vazquez-Rodriguez	Cutaneoarticular Mucormycosis Due to *Cunninghamella bertholletiae* in a Patient with AIDS	316
S. Moreno, J. García Altozano, B. Pinilla, J. C. López, Bernaldo de Quirós, A. Ortega, and E. Bouza	Lemierre's Disease: Postanginal Bacteremia and Pulmonary Involvement Caused by *Fusobacterium necrophorum*	319
Mark L. Lipman and Joseph Silva, Jr.	Endocarditis Due to *Streptococcus faecalis* with High-Level Resistance to Gentamicin	325
Laurence B. Givner, Jon S. Abramson, and Ben Wasilauskas	Meningitis Due to *Haemophilus influenzae* Type b Resistant to Ampicillin and Chloramphenicol	329
Philip M. Murphy, Douglas L. Mayers, Nadine F. Brock, and Kenneth F. Wagner	Cure of Bacille Calmette-Guérin Vaccination Abscesses with Erythromycin	335
Rebecca Clark, J. Taylor Carlisle, and Gregory T. Valainis	*Streptococcus pneumoniae* Endocarditis Presenting as an Epidural Abscess	338
Andrew L. Salzman, Fredric A. Hoffer, and Jane C. Burns	Infectious Disease Rounds: Chronic Hip Pain and Limp in a 3-Year-Old Girl	341
	HYPOTHESIS	
Gunilla Kallenius, Sven E. Hoffner, and Stefan B. Svenson	Does Vaccination with Bacille Calmette-Guérin Protect Against AIDS?	349
	CLASSICS IN INFECTIOUS DISEASES	
Th. Escherich (K.S. Bettelheim, translator)	The Intestinal Bacteria of the Neonate and Breast-Fed Infant	352

CORRESPONDENCE

HENRY W. MURRAY — Monocytes in HIV Infection — 357

BRADLEY S. BENDER AND THOMAS C. QUINN — Reply — 357

NOTICES — 358

INSTRUCTIONS TO AUTHORS — 359

Volume 11 • Supplement 2 • March–April 1989

RESEARCH TOWARDS GLOBAL CONTROL AND PREVENTION OF TUBERCULOSIS WITH AN EMPHASIS ON VACCINE DEVELOPMENT

Participants — v

JACK SCHMIDT — Opening Remarks — S335

DIXIE E. SNIDER, JR. — Introduction — S336

PRESENT APPROACHES TO TUBERCULOSIS CONTROL AND PREVENTION

KAREL STYBLO — Overview and Epidemiologic Assessment of the Current Global Tuberculosis Situation with an Emphasis on Control in Developing Countries — S339

JACQUES H. GROSSET — Present Status of Chemotherapy for Tuberculosis — S347

PAUL E. M. FINE — The BCG Story: Lessons from the Past and Implications for the Future — S353

ANTONIO PIO — Impact of Present Control Methods on the Problem of Tuberculosis — S360

PATHOGENESIS OF TUBERCULOSIS AND ITS IMPLICATIONS FOR VACCINE DEVELOPMENT

WILLIAM W. STEAD — Pathogenesis of Tuberculosis: Clinical and Epidemiologic Perspective — S366

ARTHUR M. DANNENBERG, JR. — Immune Mechanisms in the Pathogenesis of Pulmonary Tuberculosis — S369

THOMAS C. QUINN — Interactions of the Human Immunodeficiency Virus and Tuberculosis and the Implications for BCG Vaccination — S379

DONALD W. SMITH AND ERNST H. WIEGESHAUS — What Animal Models Can Teach Us About the Pathogenesis of Tuberculosis in Humans — S385

EMIL SKAMENE — Genetic Control of Susceptibility to Mycobacterial Infections — S394

RENE R. P. DE VRIES — Regulation of T Cell Responsiveness Against Mycobacterial Antigens by HLA Class 2 Immune Response Genes — S400

MOLECULAR BIOLOGY OF MYCOBACTERIA

William R. Jacobs, Jr., Scott B. Snapper, Margareta Tuckman, and Barry R. Bloom — Mycobacteriophage Vector Systems — S404

Rubina J. Patel, Willy F. Piessens, John R. David, and Dyann F. Wirth — A Cloned DNA Fragment for Identification of *Mycobacterium tuberculosis* — S411

Patrick J. Brennan — Structure of Mycobacteria: Recent Developments in Defining Cell Wall Carbohydrates and Proteins — S420

Douglas B. Young and Angela Mehlert — Serology of Mycobacteria: Characterization of Antigens Recognized by Monocolonal Antibodies — S431

IMMUNOLOGY

Willy F. Piessens — Introduction to the Immunology of Tuberculosis — S436

Jonathan R. Lamb, Raju Lathigra, Jonathan B. Rothbard, Douglas Sweetser, Richard A. Young, Juraj Ivanyi, and Douglas B. Young — Identification of Mycobacterial Antigens Recognized by T Lymphocytes — S443

Stefan H. E. Kaufmann — In Vitro Analysis of the Cellular Mechanisms Involved in Immunity to Tuberculosis — S448

Jerrold J. Ellner and Robert S. Wallis — Immunologic Aspects of Mycobacterial Infections — S455

VACCINE AND NEW DRUG DEVELOPMENT

Barry R. Bloom — New Approaches to Vaccine Development — S460

Piero Sensi — Approaches to the Development of New Antituberculosis Drugs — S467

FUTURE DIRECTIONS AND PRIORITIES

Thomas M. Daniel — Rapid Diagnosis of Tuberculosis: Laboratory Techniques Applicable in Developing Countries — S471

Francesco Parenti — New Experimental Drugs for the Treatment of Tuberculosis — S479

Ernst H. Wiegeshaus and Donald W. Smith — Evaluation of the Protective Potency of New Tuberculosis Vaccines — S484

Volume 11 • *Number 3* • *May-June 1989*

REVIEW ARTICLES

Itzhak Brook — Inoculum Effect — 361

Elias Anaissie, Gerald P. Bodey, Hagop Kantarjian, Jae Ro, Shahe E. Vartivarian, Roy Hopfer, Jennifer Hoy, and Kenneth Rolston — New Spectrum of Fungal Infections in Patients with Cancer — 369

Shahe V. Komshian, Ahmad K. Uwaydah, Jack D. Sobel, and Lawrence R. Crane — Fungemia Caused by *Candida* Species and *Torulopsis glabrata* in the Hospitalized Patient: Frequency, Characteristics, and Evaluation of Factors Influencing Outcome — 379

Uriel Kitron and Andrew Spielman	Suppression of Transmission of Malaria Through Source Reduction: Antianopheline Measures Applied in Israel, the United States, and Italy	391
Peter Berkey and Gerald P. Bodey	Nocardial Infection in Patients with Neoplastic Disease	407
Amorn Leelarasamee and Somchai Bovornkitti	Melioidosis: Review and Update	413
William C. Reeves, William E. Rawls, and Louise A. Brinton	Epidemiology of Genital Papillomaviruses and Cervical Cancer	426
Arne Tarnvik	Nature of Protective Immunity to *Francisella tularensis*	440
Larry M. Baddour, Gordon D. Christensen, Jon H. Lowrance, and W. Andrew Simpson	Pathogenesis of Experimental Endocarditis	452
Manfred S. Green, Colin Block, and Paul E. Slater	Rise in the Incidence of Viral Hepatitis in Israel Despite Improved Socioeconomic Conditions	464
	CLINICAL NOTES	
Joseph Dylewski, Harold Wiesenfeld, and Anne Latour	Postpartum Uterine Infection with *Clostridium perfringens*	470
G. Lynn Marks, Patrick E. Nolan, Kim S. Erlich, and M. Nixon Ellis	Mucocutaneous Dissemination of Acyclovir-Resistant Herpes Simplex Virus in a Patient with AIDS	474
Judith Currier and Dori F. Zaleznik	Infectious Disease Rounds: Recurrent *Haemophilus influenzae* Bacteremia in a 79-Year-Old Woman	477
	INTERNATIONAL NOTES	
Claude Scheidegger and Werner Zimmerli	Infectious Complications in Drug Addicts: Seven-Year Review of 269 Hospitalized Narcotics Abusers in Switzerland	486
	HYPOTHESIS	
G. W. Hammond, R. L. Raddatz, and D. E. Gelskey	Impact of Atmospheric Dispersion and Transport of Viral Aerosols on the Epidemiology of Influenza	494
	EDITORIAL	
Arnold S. Monto	Acute Respiratory Infection in Children of Developing Countries: Challenge of the 1990s	498
	CORRESPONDENCE	
Tsung O. Cheng	Recurrent Native-Valve Endocarditis	506
Larry M. Baddour	Reply	506
David L. Dickensheets	*Hansenula anomala* Infection	507
K. Kain and M. Noble	*Blastocytis hominis* Infection in Humans	508
Richard A. Miller and Barbara A. Minshew	Reply	510
	ERRATUM (1989;11:89)	510
	INSTRUCTIONS TO AUTHORS	511

Volume 11 • Supplement 3 • May-June 1989

INTERNATIONAL SYMPOSIUM ON VACCINE DEVELOPMENT AND UTILIZATION

	Participants	v
Kenneth J. Bart	Introduction and Perspective	S491
Carlyle Guerra de Macedo Nyle C. Brady	Opening Remarks	S493
	SESSION I: STRATEGY FOR VACCINE DELIVERY	
Donald A. Henderson	Strategies for Vaccine Delivery: Introduction	S497
Vulimiri Ramalingaswami	Importance of Vaccines in Child Survival	S498
Neal A. Halsey	Strategies for Achieving High Vaccine Coverage: Introduction	S503
	COUNTRY EXPERIENCES	
Enrique Silva	Development and Strategies of the Colombian Vaccination Program	S505
Pablo Martinez	Implementation of Vaccine Programs in Ecuador	S507
A. O. O. Sorungbe	Expanded Programme on Immunization in Nigeria	S509
Ali Abdi Farah	Mobilization for an Expanded Programme on Immunization in Somalia	S512
Taharn Bhunbhu	Expanded Programme on Immunization in Thailand	S514
	SESSION II: VACCINE DEVELOPMENT	
June E. Osborn	Vaccine Development: Introduction	S518
Bernard N. Fields and Robert M. Chanock	What Biotechnology Has to Offer Vaccine Development	S519
John C. Petricciani, Victor P. Grachev, Phillipe P. Sizaret, and Peter J. Regan	Vaccines: Obstacles and Opportunities from Discovery to Use	S524
Kenneth McIntosh	Feasible Improvements in Vaccines in the Expanded Programme on Immunization	S530
	SESSION III: NEW VACCINES	
Nathanial Pierce	New Vaccines: Introduction, Part 1	S538
Albert Z. Kapikian, Jorge Flores, Yasutaka Hoshino, Karen Midthun, Mario Gorziglia, Kim Y. Green, Robert M. Chanock, Louis Potash, Stephen D. Sears, Mary Lou Clements, Neal A. Halsey, Robert E. Black, and Irene Perez-Schael	Prospects for Development of a Rotavirus Vaccine Against Rotavirus Diarrhea in Infants and Young Children	S539
Samuel B. Formal, Thomas L. Hale, and Christine Kapfer	Shigella Vaccines	S547
Myron M. Levine, Catterine Ferreccio, Robert E. Black, Carol O. Tacket, Rene Germanier, and the Chilean Typhoid Committee	Progress in Vaccines Against Typhoid Fever	S552

James B. Kaper	*Vibrio cholerae* Vaccines	S568
James E. Maynard, Mark A. Kane, and Stephen C. Hadler	Global Control of Hepatitis B Through Vaccination: Role of Hepatitis B Vaccine in the Expanded Programme on Immunization	S574
R. S. Nussenzweig and V. Nussenzweig	Antisporozoite Vaccine for Malaria: Experimental Basis and Current Status	S579
Arnold S. Monto	New Vaccines: Introduction, Part 2	S586
Robert S. Munson, Jr., Mustafa H. Kabeer, Allen A. Lenoir, and Dan M. Granoff	Epidemiology and Prospects for Prevention of Disease Due to *Haemophilus influenzae* in Developing Countries	S588
Robert Austrian	Pneumococcal Polysaccharide Vaccines	S598
William S. Jordan, Jr.	Impediments to the Development of Additional Vaccines: Vaccines Against Important Diseases That Will Not Be Available in the Next Decade	S603
	SESSION IV: OPERATIONAL ISSUES	
Maurice R. Hilleman	Improving the Heat Stability of Vaccines: Problems, Needs, and Approaches	S613
James Cheyne	Vaccine Delivery Management	S617
Krishnaswamy Subramanyam	Vaccine Distribution: An Operations Research Study	S623
Stanley O. Foster	Immunization Opportunities Taken and Missed	S629
Neal A. Halsey, Susan Berry, Peter Carrasco, Ciro de Quadros, Josefina Martinez, Juan José Arroyo, Victor Daniel España, Eugenio Duarte, Edgar Huertas, José Ramiro Cruz, and Dean Sienko	Field Evaluation of A Simplified Unit-Dose Syringe for Administration of Measles Vaccine	S631
John R. La Montagne	Immunization Programs and Human Immunodeficiency Virus	S639
Hanena Ibrahim Giberal Saaed	Increasing Vaccine Coverage Through New Delivery Systems: A Sudan Approach	S644
	SESSION V: PUTTING RESEARCH INTO PRACTICE	
Mambu ma-Disu	Role of Nongovernmental Agencies in Vaccine Delivery	S646
Ralph H. Henderson and J. Keja	Global Control of Vaccine-Preventable Diseases: How Progress Can Be Evaluated	S649
Richard S. Reid	Political, Economic, and Administrative Resources Available for the Control of Vaccine-Preventable Diseases	S655
William H. Foege	Prospects for Universal Immunization: Strategies for Achievement	S659
Alan R. Hinman	Vaccine Development and Utilization: Summary of the Symposium	S663
Frederick C. Robbins	Concluding Remarks	S667

Volume 11 • Supplement 4 • May-June 1989

HEMOSTATIC IMPAIRMENT ASSOCIATED WITH HEMORRHAGIC FEVER VIRUSES

	Participants	v
THOMAS M. COSGRIFF AND RICHARD M. LEWIS	Introduction and Summary	S669
	VIRUSES, INFECTION, AND HEMOSTASIS	
THOMAS M. COSGRIFF	Viruses and Hemostasis	S672
ROBERT W. COLMAN	Contact Systems in Infectious Diseases	S689
HARVEY M. FRIEDMAN	Infection of Endothelial Cells by Common Human Viruses	S700
DOUGLAS B. CINES	Disorders Associated with Antibodies to Endothelial Cells	S705
G. LEVY AND M. ABECASSIS	Activation of the Immune Coagulation System by Murine Hepatitis Virus Strain 3	S712
	HEMORRHAGIC FEVER VIRUSES	
DAVID H. L. BISHOP	Infection and Coding Strategies of Arenaviruses, Phleboviruses, and Nairoviruses	S722
JAMES W. LEDUC	Epidemiology of Hemorrhagic Fever Viruses	S730
RICHARD M. LEWIS, JOHN C. MORRILL, PETER B. JAHRLING, AND THOMAS M. COSGRIFF	Replication of Hemorrhagic Fever Virus in Monocytic Cells	S736
C. J. PETERS, CHING-TONG LIU, GEORGE W. ANDERSON, JR., JOHN C. MORRILL, AND PETER B. JAHRLING	Pathogenesis of Viral Hemorrhagic Fevers: Rift Valley Fever and Lassa Fever Contrasted	S743
JOHN W. HUGGINS	Prospects for Treatment of Viral Hemorrhagic Fevers with Ribavirin, a Broad-Spectrum Antiviral Drug	S750
	ARGENTINE HEMORRHAGIC FEVER	
FELISA C. MOLINAS, MARÍA M. E. DE BRACCO, AND J. I. MAIZTEGUI	Hemostasis and the Complement System in Argentine Hemorrhagic Fever	S762
RICHARD H. KENYON AND C. J. PETERS	Actions of Complement on Junin Virus	S771
	AFRICAN HEMORRHAGIC FEVERS	
J. H. S. GEAR	Clinical Aspects of African Viral Hemorrhagic Fevers	S777
JOHN D. FRAME	Clinical Features of Lassa Fever in Liberia	S783
PIERRE H. SUREAU	Firsthand Clinical Observations of Hemorrhagic Manifestations in Ebola Hemorrhagic Fever in Zaire	S790
R. SWANEPOEL, D. E. GILL, A. J. SHEPHERD, P. A. LEMAN, J. H. MYNHARDT, AND S. HARVEY	The Clinical Pathology of Crimean-Congo Hemorrhagic Fever	S794
A. J. SHEPHERD, R. SWANEPOEL, AND P. A. LEMAN	Antibody Response in Crimean-Congo Hemorrhagic Fever	S801

Thomas M. Cosgriff, John C. Morrill, Gerald B. Jennings, Loreen A. Hodgson, Michael V. Slayter, Paul H. Gibbs, and C. J. Peters	Hemostatic Derangement Produced by Rift Valley Fever Virus in Rhesus Monkeys	S807
John C. Morrill, Gerald B. Jennings, Thomas M. Cosgriff, Paul H. Gibbs, and C. J. Peters	Prevention of Rift Valley Fever in Rhesus Monkeys with Interferon-α	S815
	DENGUE AND KYASANUR FOREST DISEASE	
Natth Bhamarapravati	Hemostatic Defects in Dengue Hemorrhagic Fever	S826
Scott B. Halstead	Antibody, Macrophages, Dengue Virus Infection, Shock, and Hemorrhage: A Pathogenetic Cascade	S830
Leon Rosen	Disease Exacerbation Caused by Sequential Dengue Infections: Myth or Reality?	S840
Chitra Krishnamurti and Barbara Alving	Effect of Dengue Virus on Procoagulant and Fibrinolytic Activities of Monocytes	S843
Wufang Fan, Shurong Yu, and Thomas M. Cosgriff	The Reemergence of Dengue in China	S847
Khorshed Pavri	Clinical, Clinicopathologic, and Hematologic Features of Kyasanur Forest Disease	S854
	HEMORRHAGIC FEVER WITH RENAL SYNDROME	
Juhani Lähdevirta	The Minor Problem of Hemostatic Impairment in Nephropathia Epidemica, the Mild Scandinavian Form of Hemorrhagic Fever with Renal Syndrome	S860
Ho Wang Lee	Hemorrhagic Fever with Renal Syndrome in Korea	S864
Munho Lee, Byoung-Kook Kim, Suhnggwon Kim, Seonyang Park, Jin Suk Han, Seung Taik Kim, and Jung Sang Lee	Coagulopathy in Hemorrhagic Fever with Renal Syndrome (Korean Hemorrhagic Fever)	S877
Mei Ying Guang, Guo Zheng Liu, and Thomas M. Cosgriff	Hemorrhage in Hemorrhagic Fever with Renal Syndrome in China	S884
A. Antoniadis, J. W. LeDuc, N. Acritidis, S. Alexiou-Daniel, A. Kyparissi, and G. A. Saviolakis	Hemorrhagic Fever with Renal Syndrome in Greece: Clinical and Laboratory Characteristics of the Disease	S891

Volume 11 • Number 4 • July–August 1989

	REVIEW ARTICLES	
Dennis M. Dixon, Thomas J. Walsh, William G. Merz, and Michael R. McGinnis	Infections Due to *Xylohypha bantiana* (*Cladosporium trichoides*)	515
Charles E. Cherubin, Robert H. K. Eng, Ragnar Norrby, Jacques Modai, Guy Humbert, and Gary Overturf	Penetration of Newer Cephalosporins into Cerebrospinal Fluid	526

Marla J. Steinbeck and James A. Roth	Neutrophil Activation by Recombinant Cytokines	549
Howard E. Edelstein, Robert E. McCabe, and Ellen Lieberman	Perinephric Abscess in Renal Transplant Recipients: Report of Seven Cases and Review	569
Michael A. McIlroy, Daniel Reddy, Norman Markowitz, and Louis D. Saravolatz	Infected False Aneurysms of the Femoral Artery in Intravenous Drug Addicts	578
Thomas J. Marrie, Heather Durant, and Linda Yates	Community-Acquired Pneumonia Requiring Hospitalization: 5-Year Prospective Study	586
Charles S. Rabkin, William R. Jarvis, Roger L. Anderson, John Govan, Jeffrey Klinger, John LiPuma, William J. Martone, H. Monteil, C. Richard, Shiro Shigeta, Anibal Sosa, Terrence Stull, Jana Swenson, and Donald Woods	*Pseudomonas cepacia* Typing Systems: Collaborative Study to Assess Their Potential in Epidemiologic Investigations	600
	CLINICAL NOTES	
Scott Porter Neeley and David W. Denning	Cutaneous *Mycobacterium thermoresistibile* Infection in a Heart Transplant Recipient	608
Christian C. Patrick, Claire Langston, and Carol J. Baker	*Bacillus* Species Infections in Neonates	612
Robert H. Jackson and John W. King	Tenosynovitis of the Hand: A Forgotten Manifestation of Tuberculosis	616
Dedra Buchwald, Stephen B. Soumerai, Nancy Vandevanter, Michael R. Wessels, and Jerry Avorn	Effect of Hospitalwide Change in Clindamycin Dosing Schedule on Clinical Outcome	619
Daniel J. Barbaro, Venetia L. Orcutt, and Brett M. Coldiron	*Mycobacterium avium–Mycobacterium intracellulare* Infection Limited to the Skin and Lymph Nodes in Patients with AIDS	625
Linnie M. Golightly, Lisa R. Hirschhorn, and Peter F. Weller	Infectious Disease Rounds: Fever and Headache in a Splenectomized Woman	629
	INTERNATIONAL NOTES	
J. C. Katiyar, Suman Gupta, and Satyavan Sharma	Experimental Models in Drug Development for Helminthic Diseases	638
Carlos Montalban, Rafael Martinez-Fernandez, Jose L. Calleja, Juan de D. Garcia-Diaz, Rafael Rubio, Fernando Dronda, Santiago Moreno, Miguel Yebra, Carlos Barros, Julio Cobo, Maria C. Martinez, Fernando Ruiz, and Jose R. Costa	Visceral Leishmaniasis (Kala-Azar) as an Opportunistic Infection in Patients Infected with the Human Immunodeficiency Virus in Spain	655
	CORRESPONDENCE	
Charles H. Zierdt	*Blastocystis hominis* as a Human Pathogen	661
Kenneth V. I. Rolston, Robert Winans, and Saul Rodriguez	*Blastocystis hominis*: Pathogen or Not?	661

Richard A. Miller and Barbara H. Minshew	Reply	663
James Hospedales	Heterosexual Spread of HIV Infection	663
Victor De Gruttola	Reply	664
Mary E. Wilson	Prosthetic Valve Endocarditis and Paravalvular Abscess Caused by *Actinobacillus actinomycetemcomitans*	665
Pablo M. Rabadan and Encarna Vilalta	Non-O:1 *Vibrio cholerae* Bacteremia	667
Bernard Rudensky and Meir Isacsohn	β-Hemolytic Group C Streptococci and Pharyngitis	668
Larry M. Baddour	Listerial Endocarditis Following Coronary Artery Bypass Surgery	669
Thomas N. Helm	Disseminated Fusarial Infection	670
Susan E. Richardson and Robert M. Bannatyne	Reply	670
	ERRATUM (1989;11:289–298)	672
	NOTICES	673
	INSTRUCTIONS TO AUTHORS	674

Volume 11 • Supplement 5 • July–August 1989

SECOND INTERNATIONAL SYMPOSIUM ON NEW QUINOLONES

Ethan Rubinstein	Introduction	S897
Julian Davies	The New Quinolones: Back to the Future	S898
	SESSION 1: MODE OF ACTION	
David C. Hooper and John S. Wolfson	Mode of Action of the Quinolone Antimicrobial Agents: Review of Recent Information	S902
	Extended Abstracts	S912
	SESSION 2: MODE OF ACTION: ANTIBACTERIAL ACTIVITY	
Francis Bellido and Jean-Claude Pechère	Laboratory Survey of Fluoroquinolone Activity	S917
	Extended Abstracts	S925
	SESSION 3: BACTERIAL UPTAKE AND KILLING	
Jonathan M. Diver	Quinolone Uptake by Bacteria and Bacterial Killing	S941
	Extended Abstracts	S947

	SESSSION 4: RESISTANCE AND MECHANISMS	
JOHN S. WOLFSON AND DAVID C. HOOPER	Bacterial Resistance to Quinolones: Mechanisms and Clinical Importance	S960
	Extended Abstracts	S969
	SESSION 5: USE AGAINST INTRACELLULAR PATHOGENS	
JEAN-JACQUES POCIDALO	Use of Fluoroquinolones for Intracellular Pathogens	S979
	Extended Abstracts	S985
	SESSION 6: HUMAN PHARMACOKINETICS	
H. LODE	Pharmacokinetics and Clinical Results of Parenterally Administered New Quinolones in Humans	S996
	Extended Abstracts	S1005
	SESSION 7: ANTIBIOTIC COMBINATIONS	
HAROLD C. NEU	Synergy of Fluoroquinolones with Other Antimicrobial Agents	S1025
	Extended Abstracts	S1036
	SESSION 8: TISSUE PENETRATION	
DALE N. GERDING AND JOHN A. HITT	Tissue Penetration of the New Quinolones in Humans	S1046
	Extended Abstracts	S1058
	SESSION 9: CELLULAR SYSTEMS	
	Extended Abstracts	S1066
	SESSION 10: CONCENTRATIONS IN HUMAN TISSUES AND FLUIDS	
	Extended Abstracts	S1070
	SESSION 11: DRUG INTERACTIONS	
BENJAMIN I. DAVIES AND FRANCIS P. V. MAESEN	Drug Interactions with Quinolones	S1083
	Extended Abstracts	S1091
	SESSION 12: PHARMACOKINETICS IN THE ELDERLY	
S. RAGNAR NORRBY AND BENGT LJUNGBERG	Pharmacokinetics of Fluorinated 4-Quinolones in the Aged	S1102
	Extended Abstracts	S1107
	SESSION 13: USE IN PEDIATRICS	
D. ADAM	Use of Quinolones in Pediatric Patients	S1113
	Extended Abstracts	S1117
	SESSION 14: METABOLISM OF QUINOLONES	
F. SÖRGEL	Metabolism of Gyrase Inhibitors	S1119
	Extended Abstracts	S1130

	SESSION 15: OPEN STUDIES	
	Extended Abstracts	S1138
	SESSION 16: ACUTE INFECTIOUS DIARRHEA	
Olivier Fontaine	Antibiotics in the Management of Shigellosis in Children: What Role for the Quinolones?	S1145
	Extended Abstracts	S1151
	SESSION 17: BACTEREMIA AND SEVERE INFECTIONS	
Pramod M. Shah	Use of Quinolones for the Treatment of Patients with Bacteremia	S1156
	Extended Abstracts	S1160
	SESSION 18: TYPHOID AND ENTERIC FEVER	
Eduardo Rodríguez-Noriega, Jaime Andrade-Villanueva, and Gerardo Amaya-Tapia	Quinolones in the Treatment of Salmonella Carriers	S1179
	Extended Abstracts	S1188
	SESSION 19: ENDOCARDITIS AND INFECTIONS OF THE CENTRAL NERVOUS SYSTEM AND EYE, NOSE, AND THROAT	
W. Michael Scheld	Quinolone Therapy for Infections of the Central Nervous System	S1194
	Extended Abstracts	S1203
	SESSION 20: PULMONARY INFECTIONS	
J. P. Thys, F. Jacobs, and S. Motte	Quinolones in the Treatment of Lower Respiratory Tract Infections	S1212
	Extended Abstracts	S1220
	SESSION 21: IMMUNOSUPPRESSED HOST AND GUT DECONTAMINATION	
Maja Rozenberg-Arska, Ad W. Dekker, and Jan Verhoef	Prevention of Infections in Granulocytopenic Patients by Fluorinated Quinolones	S1231
	Extended Abstracts	S1237
	SESSION 22: CYSTIC FIBROSIS	
Bernard Grenier	Use of the New Quinolones in Cystic Fibrosis	S1245
	Extended Abstracts	S1253
	SESSION 23: BONE AND JOINT INFECTIONS	
Francis A. Waldvogel	Use of Quinolones for the Treatment of Osteomyelitis and Septic Arthritis	S1259
	Extended Abstracts	S1264
	SESSION 24: CHLAMYDIAL INFECTIONS	
J. D. Oriel	Use of Quinolones in Chlamydial Infection	S1273
	Extended Abstracts	S1277

SESSION 25: PROPHYLAXIS AND THERAPY FOR SURGICAL INFECTIONS

CARL ERIK NORD — Surgical Prophylaxis and Treatment of Surgical Infections with Quinolones — S1287

Extended Abstracts — S1292

SESSION 26: SEXUALLY TRANSMITTED DISEASES AND OBSTETRIC AND GYNECOLOGIC INFECTIONS

AVERY S. C. CHAN — Results of Treatment with Quinolones of Sexually Transmitted Diseases in the Far East: A Brief Summary — S1305

Extended Abstracts — S1307

SESSION 27: URINARY TRACT INFECTIONS AND PROSTATITIS

KURT G. NABER — Use of Quinolones in Urinary Tract Infections and Prostatitis — S1321

Extended Abstracts — S1338

SESSION 28: LONG-TERM USE AND SAFETY

PETER BALL — Long-Term Use of Quinolones and Their Safety — S1365

Extended Abstracts — S1371

SESSION 29: EFFECT ON GASTROINTESTINAL FLORA

BARBARA E. MURRAY — Impact of Fluoroquinolones on the Gastrointestinal Flora — S1372

Extended Abstracts — S1379

SESSION 30: MECHANISMS OF SIDE EFFECTS

ARNE FORSGREN, ANDERS BREDBERG, AND KRISTIAN RIESBECK — New Quinolones: In Vitro Effects as a Potential Source of Clinical Toxicity — S1382

Extended Abstracts — S1390

SESSION 31: POST-MARKETING SURVEILLANCE

P. G. DAVEY — Post-Marketing Surveillance of the Quinolones: A View from Great Britain — S1402

Extended Abstracts — S1408

INDEXES TO SYMPOSIUM

Author Index — S1413

Subject Index — S1420

Volume 11 • Number 5 • September–October 1989

REVIEW ARTICLES

JEROME H. KIM AND JOHN R. PERFECT — Infection and Cyclosporine — 677

MICHAEL SANDS AND RICHARD B. BROWN — Interactions of Cyclosporine with Antimicrobial Agents — 691

Jerome H. Kim, Charles van der Horst, Cynthia D. Mulrow, and G. Ralph Corey	*Staphylococcus aureus* Meningitis: Review of 28 Cases	698
Robert S. Hirsch and Nigel G. Clarke	Infection and Periodontal Diseases	707
Ann Larson	Social Context of Human Immunodeficiency Virus Transmission in Africa: Historical and Cultural Bases of East and Central African Sexual Relations	716
S. Beaussoleil, C. Bosgiraud, and J. A. Nicolas	Animal Lentivirus Replication and Reverse Transcriptase Inhibitors	732
Christopher W. Ingram, Joel Sennesh, James N. Cooper, and John R. Perfect	Disseminated Zygomycosis: Report of Four Cases and Review	741
Robert M. Genta	Global Prevalence of Strongyloidiasis: Critical Review with Epidemiologic Insights into the Prevention of Disseminated Disease	755
	CLINICAL NOTES	
Robin Henry Dretler and David B. Rausher	Giant Esophageal Ulcer Healed with Steroid Therapy in an AIDS Patient	768
Pina K. Wong, Wendell T. W. Ching, K. J. Kwon-Chung, and Richard D. Meyer	Disseminated *Phialophora parasitica* Infection in Humans: Case Report and Review	770
Vicki A. Morrison and Kenneth F. Wagner	Clinical Manifestations of *Kingella kingae* Infections: Case Report and Review	776
Michael S. Gelfand, Allen B. Kaiser, and W. Andrew Dale	Localized Brucellosis: Popliteal Artery Aneurysm, Mediastinitis, Dementia, and Pneumonia	783
Felix A. Sarubbi, Glenn D. Gafford, and David R. Bishop	Gram-Negative Bacterial Pyomyositis: Unique Case and Review	789
Wayne A. Marasco, Susan Lester, and Jeffrey Parsonnet	ID Rounds: Unusual Presentation of Cat Scratch Disease in a Patient Positive for Antibody to the Human Immunodeficiency Virus	793
	EDITORIAL	
Philip A. Mackowiak	Influence of Fever on Pharmacokinetics	804
	HISTORICAL ARTICLE	
Boris Velimirovic and Helga Velimirovic	Plague in Vienna	808
	CLASSICS IN INFECTIOUS DISEASES	
A. E. Wright and Stewart R. Douglas; communicated by John Burdon Sanderson	An Experimental Investigation of the *Rôle* of the Blood Fluids in Connection with Phagocytosis	827
	CORRESPONDENCE	
Theodor Khavkin	*Coxiella burnetii* Infection in Prosthetic Devices	835
K. G. Kerr	Low Back Pain as the Only Presenting Symptom in *Streptococcus sanguis* Endocarditis	836
George F. Risi	Additional Case of Liver Abscess Due to *Streptococcus milleri*	837
	NOTICES	839
	INSTRUCTIONS TO AUTHORS	840

Volume 11 • Supplement 6 • September–October 1989

LYME DISEASE AND OTHER SPIROCHETAL DISEASES

	Participants	iv
VINCENT T. ANDRIOLE	Introduction	S1433
CAROL A. CIESIELSKI, LAURI E. MARKOWITZ, ROSE HORSLEY, ALLEN W. HIGHTOWER, HAROLD RUSSELL, AND CLAIRE V. BROOME	Lyme Disease Surveillance in the United States, 1983–1986	S1435
WILLY BURGDORFER, STANLEY F. HAYES, AND DAN CORWIN	Pathophysiology of the Lyme Disease Spirochete, *Borrelia burgdorferi*, in Ixodid Ticks	S1442
JOHN F. ANDERSON	Epizootiology of *Borrelia* in *Ixodes* Tick Vectors and Reservoir Hosts	S1451
GEORGE P. SCHMID	Epidemiology and Clinical Similarities of Human Spirochetal Diseases	S1460
ALAN G. BARBOUR	The Molecular Biology of *Borrelia*	S1470
BERNARD W. BERGER	Dermatologic Manifestations of Lyme Disease	S1475
ANDREW R. PACHNER	Neurologic Manifestations of Lyme Disease, the New "Great Imitator"	S1482
PAUL H. DURAY	Clinical Pathologic Correlations of Lyme Disease	S1487
RAYMOND J. DATTWYLER, DAVID J. VOLKMAN, AND BENJAMIN J. LUFT	Immunologic Aspects of Lyme Borreliosis	S1494
JOHN J. HALPERIN	Abnormalities of the Nervous System in Lyme Disease: Response to Antimicrobial Therapy	S1499
RUSSELL C. JOHNSON	Isolation Techniques for Spirochetes and Their Sensitivity to Antibiotics in Vitro and in Vivo	S1505
EDWARD W. HOOK III	Treatment of Syphilis: Current Recommendations, Alternatives, and Continuing Problems	S1511
BENJAMIN J. LUFT, P. D. GOREVIC, JOHN J. HALPERIN, DAVID J. VOLKMAN, AND RAYMOND J. DATTWYLER	A Perspective on the Treatment of Lyme Borreliosis	S1518

Volume 11 • Number 6 • November–December 1989

EDITORIAL NOTES

EDWARD H. KASS	From the Editor	843
RID EDITORIAL BOARD	From the Associate Editors	844
RID STAFF	From the Staff	844

REVIEW ARTICLES

PATRICK G. GALLAGHER AND CHATRCHAI WATANAKUNAKORN	Pseudomonas Bacteremia in a Community Teaching Hospital, 1980–1984	846

David Hone and Jim Hackett	Vaccination Against Enteric Bacterial Diseases	853
Samir M. Douidar and Wayne R. Snodgrass	Potential Role of Fluoroquinolones in Pediatric Infections	878
Juan Berenguer, Joaquin Diaz-Mediavilla, Daniel Urra, and Patricia Muñoz	Central Nervous System Infection Caused by *Pseudallescheria boydii*: Case Report and Review	890
Neil M. Ampel, Marion A. Wieden, and John N. Galgiani	Coccidioidomycosis: Clinical Update	897
Hiroshi Saito, Linda Elting, Gerald P. Bodey, and Peter Berkey	Serratia Bacteremia: Review of 118 Cases	912
B. Settergren, P. Juto, B. Trollfors, G. Wadell, and S. R. Norrby	Clinical Characteristics of Nephropathia Epidemica in Sweden: Prospective Study of 74 Cases	921
Robert W. Quinn	Comprehensive Review of Morbidity and Mortality Trends for Rheumatic Fever, Streptococcal Disease, and Scarlet Fever: The Decline of Rheumatic Fever	928
Andreas E. Stuck, Christoph E. Minder, and Felix J. Frey	Risk of Infectious Complications in Patients Taking Glucocorticosteroids	954
J. Weber, T. Mettang, E. Staerz, C. Machleidt, and U. Kuhlmann	Pulmonary Disease Due to *Mycobacterium xenopi* in a Renal Allograft Recipient: Report of a Case and Review	964
	CLINICAL NOTES	
David D. Hurd, David B. Staub, Robert I. Roelofs, and Louis P. Dehner	Profound Muscle Weakness as the Presenting Feature of Disseminated Cryptococcal Infection	970
Simon de Marie, Richenel T. O. Tjon A Tham, Andel G. L. van der May, Geert Meerdink, Ralph van Furth, and Jos W. M. van der Meer	Clinical Features and Nonsurgical Treatment of Parapharyngeal Space Infections Complicating Throat Infection	975
Michael S. Gelfand, Thomas Hodgkiss, and Bryan P. Simmons	Multiple Hepatic Abscesses Caused by *Streptococcus milleri* in Association with an Intrauterine Device	983
Judith S. Currier and James H. Maguire	ID Rounds: Problems in the Management of Falciparum Malaria	988
	HISTORICAL ARTICLES	
Eli Chernin	Richard Pearson Strong and the Iatrogenic Plague Disaster in Bilibid Prison, Manila, 1906	996
Robert I. Wise, Elizabeth A. Ossman, and Dwight R. Littlefield	Personal Reflections on Nosocomial Staphylococcal Infections and the Development of Hospital Surveillance	1005
	CLASSICS IN INFECTIOUS DISEASES	
George Gee Jackson	The Medical Research Council Common Cold Unit, Harvard Hospital, Salisbury, Wilts, England	1020
Christopher Howard Andrewes	Adventures Among Viruses. III. The Puzzle of the Common Cold	1022

CORRESPONDENCE

F. J. Roberts — Definition of Polymicrobial Bacteremia — 1029

J. M. Guerin, C. Lustman, and F. Barbotin-Larrieu — Polymicrobial Bacteremia — 1030

Allen G. Reuben, Daniel M. Musher, Richard J. Hamill, and Ingrid Broucke — Reply — 1031

Peter Fischer, Mark S. Drapkin, and Gerald Harold — *Actinobacillus actinomycetemcomitans* Infection — 1032

Peter Piliero, Paul E. Harnick, Gary S. Rosenbaum, Natalie C. Klein, and Burke A. Cunha — Infection Due to *Actinobacillus actinomycetemcomitans* — 1033

R. E. Holliman — Gentamicin-Resistant Enterococci and Endocarditis — 1034

David R. Nalin — Measles Vaccine — 1035

C. M. Stein — Poncet's Disease: Tuberculous Rheumatism — 1035

NOTICES — 1036

ERRATUM — 1036

INSTRUCTIONS TO AUTHORS — 1037

INDEXES TO VOLUME 11

Author Index — 1039

Subject Index — 1049

Contents for Volume 11 — 1057

Volume 11 • Supplement 7 • November–December 1989

INFECTIOUS COMPLICATIONS OF NEOPLASTIC DISEASE

Participants — v

Donald Armstrong — Introduction and Summary — S1527

Daniel W. Sawyer, Gerald R. Donowitz, and Gerald L. Mandell — Polymorphonuclear Neutrophils: An Effective Antimicrobial Force — S1532

J. Verhoef, M. Rozenberg-Arska, and A. Dekker — Prevention of Infection in the Neutropenic Patient — S1545

Philip A. Pizzo — Considerations for the Prevention of Infectious Complications in Patients with Cancer — S1551

Lowell S. Young, Ronnie Gascon, Soosan Alam, and Luiz Eduardo M. Bermudez — Monoclonal Antibodies for Treatment of Gram-Negative Infections — S1564

James C. Wade — Antibiotic Therapy for the Febrile Granulocytopenic Cancer Patient: Combination Therapy vs. Monotherapy — S1572

Gerald P. Bodey	Evolution of Antibiotic Therapy for Infection in Neutropenic Patients: Studies at M. D. Anderson Hospital	**S1582**
Donald Armstrong	Problems in Management of Opportunistic Fungal Diseases	**S1591**
Richard D. Diamond	Immune Response to Fungal Infection	**S1600**
F. Meunier	New Methods for Delivery of Antifungal Agents	**S1605**
Wang Qi-Nan and Qui Zhong-Da	Infection in Acute Leukemia: An Analysis of 433 Episodes	**S1613**
Suresh H. Advani and Shripad D. Banavali	Pattern of Infection in Hematologic Malignancies: An Indian Experience	**S1621**
Deja Tanphaichitra	Tropical Disease in the Immunocompromised Host: Melioidosis and Pythiosis	**S1629**
Mario Paredes-Espinoza	Infections in Immunocompromised Patients in Mexico	**S1644**
Bruce Polsky	Antiviral Chemotherapy for Infection with Human Immunodeficiency Virus	**S1648**
Henry Masur	Prevention of *Pneumocystis carinii* Pneumonia	**S1664**
W. Michael Scheld	Drug Delivery to the Central Nervous System: General Principles and Relevance to Therapy for Infections of the Central Nervous System	**S1669**
Joel D. Meyers	Prevention of Cytomegalovirus Infection After Marrow Transplantation	**S1691**
Timothy E. Kiehn, Paul D. Ellner, and Delia Budzko	Role of the Microbiology Laboratory in Care of the Immunosuppressed Patient	**S1706**